REMARKS/ARGUMENTS

Claims 1-35 are pending in this application. By this Amendment, claim 35 is added. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Withdrawal of the rejections in view of the following remarks is respectfully requested.

The Examiner is thanked for the indication that claims 14-17 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, for the reasons set forth below, claims 14-17 have not been rewritten in independent form at this time.

The Office Action rejects claims 1-13 and 18-33 under 35 U.S.C. §102(e) over U.S. Patent No. 6,617,843 to Min et al. (hereinafter "Min"). The rejection is respectfully traversed.

Independent claim 1 recites, *inter alia*, at least one cooling fluid spraying unit configured to spray cooling fluid toward faces of modular ICs in an oblique direction with respect to a central plane of the at least one cooling fluid spraying unit. Min neither discloses nor suggests such features.

Min discloses a contactor for semiconductor devices, or IC chips, including a fixed block 110 which couples a test tray 116 loaded with devices to a tester 115. A push plate 150 positioned opposite the test tray 116 includes a plurality of air nozzles 160 which extend from a face of the push plate 150 and toward the test tray 116. As the test tray 116 loaded with devices

is moved into position for testing, the push plate 150 moves toward the test tray 116 until the tips of the nozzles 160 contact the tray 116. Heating or cooling air generated by a heater 310 or cooling tube 320, respectively, is blown through an air duct 300, out through the nozzles 160, and onto the tray 116/devices as required to maintain the proper temperature. The heating or cooling air flows in an axial direction of the nozzles 160 and directly onto a face of the devices and/or surface of the tray 116. This is in a direction which is substantially orthogonal to the face of the devices under test, as Min clearly discloses that the nozzle tube 163 is in direct contact with the devices loaded on the tray 116 (see column 4, line 66 – column 5, line 8 of Min). Thus, Min neither discloses nor suggests at least one cooling fluid spraying unit configured to spray cooling fluid toward faces of modular ICs in an oblique direction with respect to a central plane of the at least one cooling fluid spraying unit.

Further, it would be well understood by one of ordinary skill in the art that a modular IC, as recited in independent claim 1, comprises a printed circuit board (PCB) and a plurality of ICs mounted thereon. In a modular IC test handler, terminal pins of the PCB are electrically connected to test sockets in order to connect the modular ICs for testing. In contrast, in a handler which tests IC chips such as that disclosed by Min, the IC chips are directly connected to the test sockets. Thus, because Min's handler is designed to test IC chips, it differs in structure, and requires that the heating or cooling air be sprayed directly onto the faces of the IC chips, in a

direction which is axial with respect to the nozzles 160, and thus necessarily not oblique, with respect to a central plane of the nozzle 116.

Additionally, independent claim 1 further recites, *inter alia*, a device attached to a press unit including a frame and a plurality of push bars arranged at fixed intervals on a front surface of the frame for pushing edges of modular ICs mounted on carriers to connect the modular ICs to test sockets. Min neither discloses nor suggests such features. More specifically, if the push plate 150 and nozzles 160 disclosed by Min are compared to the claimed press unit and at least one cooling fluid spraying unit recited in independent claim 1, respectively, as suggested in the Office Action, then Min clearly neither discloses nor suggests a plurality of push bars as recited in independent claim 1. Min discloses that the plurality of nozzles 160 make contact with the tray 116 and/or devices so as to impart cooling air, but not that the nozzles 160 impart any force on edges of the devices which force them into contact with the tester 115, as do the push bars recited in independent claim 1. Rather, Min discloses that the devices are brought into contact with the sockets of the tester 115 as the tray 116 is fitted into a groove formed in the fixed block 110 and the combining portion 112 of the fixed block 110 is fitted into the tester 115 (see column 3, lines 31-45 of Min).

For at least these reasons, it is respectfully submitted that independent claim 1 is not anticipated by Min, and thus the rejection of independent claim 1 under 35 U.S.C. §102(e) over Min should be withdrawn. Rejected dependent claims 2-13 and 18-20, as well as objected to

claims 14-17, are allowable at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features.

Independent claim 21 recites, *inter alia*, a press unit including a frame and a plurality of push bars arranged at fixed intervals on a front surface of the frame for pushing edges of modular ICs mounted on carriers to connect the modular ICs to the plurality of test sockets. Independent claim 21 further recites, *inter alia*, at least one cooling fluid spraying unit configured to spray cooling fluid toward faces of modular ICs in an oblique direction with respect to a central plane of the at least one cooling fluid spraying unit. As set forth above, Min neither discloses nor suggests such features.

Accordingly, it is respectfully submitted that independent claim 21 is not anticipated by Min, and thus the rejection of independent claim 21 under 35 U.S.C. §102(e) over Min should be withdrawn. Rejected dependent claims 22-31 are allowable at least for the reasons set forth above with respect to independent claim 21, from which they depend, as well as for their added features.

Independent claim 32 recites, *inter alia*, a device attached to a plurality of push bars arranged at fixed intervals on a front surface of the frame for pushing edges of modular ICs mounted on carriers to connect the modular ICs to test sockets. Independent claim 32 further recites, *inter alia*, at least one cooling fluid spraying unit configured to be supported by the at least one supporting member so as to be interposed between the plurality of push bars of the press

unit and configured to spray cooling fluid toward modular ICs connected to test sockets of the handler. Min neither discloses nor suggests such features.

More specifically, as set forth above, if the push plate 150 and nozzles 160 disclosed by Min are compared to the claimed press unit and at least one cooling fluid spraying unit recited in independent claim 32, respectively, as suggested in the Office Action, then Min clearly neither discloses nor suggests at least one cooling fluid spraying unit interposed between a plurality of push bars of the press unit, as recited in independent claim 32. Further, because Min neither discloses nor suggests any type of push bars as recited in independent claim 32, Min necessarily neither discloses nor suggests that the nozzles 160 are interposed between any types of push bars on the push plate. Thus, Min neither discloses nor suggests a plurality of push bars, nor at least one cooling fluid spraying unit interposed between the plurality of push bars, as recited in independent claim 32.

Accordingly, it is respectfully submitted that independent claim 32 is not anticipated by Min, and thus the rejection of independent claim 32 under 35 U.S.C. §102(e) over Min should be withdrawn. Rejected dependent claims 33-34 are allowable at least for the reasons set forth with respect to independent claim 32, from which they depend, as well as for their added features.

New claim 35 is added to the application. It is respectfully submitted that new claim 35 defines over the applied prior art reference and meets the requirements of 35 U.S.C. §112. More specifically, new claim 35 recites, *inter alia*, spraying cooling fluid through at least one cooling

fluid spraying unit toward faces of the modular ICs in a direction which is oblique with respect to a central plane of the at least one cooling fluid spraying unit. As set forth above, Min neither discloses nor suggests such features, and thus it is respectfully submitted that new claim 35 is allowable over Min.

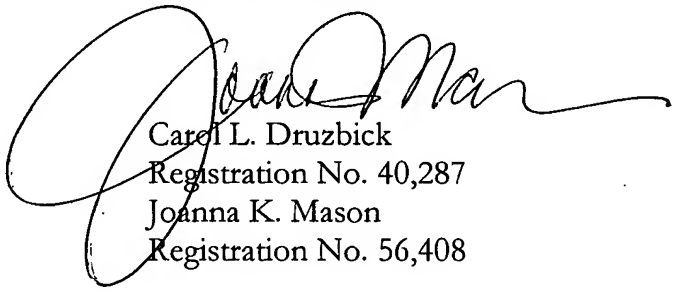
CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned, **JOANNA K. MASON**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this,

concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



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